

Amendments to the Claims

1-14. (Cancelled)

15. (Currently Amended) A motor vehicle condenser comprising:

a multitude of stacked main-section plates having separate internal flow channels for refrigerating fluid and for cooling fluid,

wherein the main-section plates are assembled to delimit alternating first flow channels for refrigerating fluid and second flow channels for cooling fluid and are assembled in groups or sub groups of plates such that the groups or subgroups form at least two fluid passes for each of the refrigerating and cooling fluids,[[; and]]

wherein the main-section plates define an inlet for each of the flow channels, respectively, and an outlet for each of the flow channels, respectively, with the inlet and the outlet of each flow channel spaced from each other and with one of the fluid passes defined in one direction from the inlet to the outlet of one of the respective flow channels,

wherein the plates further comprise communication passages to allow refrigerating and cooling fluid to pass from one flow channel to another and annular ducts facing the communication passages,

wherein the annular ducts alternately face the communication passages in such a way that the refrigerating and cooling fluid are prevented from mixing with one another, and

wherein the condenser comprises at least one condenser inlet and one condenser outlet for refrigerating fluid and at least one inlet pass (a) over the refrigerating fluid communicating with said condenser inlet, and an outlet pass (c) communicating with said condenser outlet, the cross section of the passes diminishing from the inlet pass towards the outlet pass,

16.-18. (Cancelled)

19. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the main-section plates are equipped with two communication passages intended for the passage of the refrigerating fluid (F1) and two communication passages intended for the passage of the cooling fluid (F2).

20. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the stacked plates (2) are equipped with turned-up peripheral edges (3) which are joined together in a sealed manner.

21. (Cancelled)

22. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein one refrigerating fluid communication passage or, as appropriate, one cooling fluid communication passage, is omitted in some of the main-section plates so as to determine passes for the circulation of the refrigerating fluid or, as appropriate, for the circulation of the cooling fluid.

23. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the plates (2) are arranged in a first series (94) for cooling the refrigerating fluid until it condenses, and a second series (96) for cooling the refrigerating fluid below the temperature at which it condenses.

24. (Previously Presented) A motor vehicle condenser, as claimed in claim 23, wherein the condenser further comprises a bottle (100) built in between the first and second series of plates (94, 96).

25. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein turbulence generators (132, 136) are arranged between the plates (2).

26. (Currently Amended) A motor vehicle condenser, as claimed in claim 25 [[19]], wherein the plates have reliefs (144, 150, 158, 160) which constitute the turbulence generators.

27. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the hydraulic diameter of the flow channels for the fluids (F1 and F2) is between 0.1 mm and 3 mm.

28. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the annular ducts comprise bowls (122) formed in the plates (2).

29. (Currently Amended) A motor vehicle cooling circuit comprising the condenser as claimed in claim 15 [[18]], wherein the plates are assembled to allow for the flow of a cooling fluid (F2) comprising water from the motor vehicle engine cooling circuit.

30. (Currently Amended) An air-conditioning circuit, for the cabin of a motor vehicle, comprising an evaporator, a compressor and a condenser, in which a refrigerating fluid circulates, and wherein the condenser is in accordance with claim 15 [[18]].

31. (Cancelled)

32. (Previously Presented) A motor vehicle condenser, as claimed in claim 28, wherein one refrigerating fluid communication passage or one cooling fluid communication passage, is omitted in some of the main-section plates so as to determine passes for the circulation of the refrigerating fluid or for the circulation of the cooling fluid.

33. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein each main-section plate has a longitudinal axis and has a first end and a second end spaced from each other along the longitudinal axis with the main-section plates stacked with each first end adjacent another first end and with each second end adjacent another second

end and with the inlet of one flow channel defined at one of the first ends and with the outlet of that flow channel defined at one of the second ends.

34. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein the inlets and outlets for each of the flow channels are further defined by the main-section plates as a first inlet and a first outlet for the first flow channel and a second inlet and a second outlet for the second flow channel, and one of the at least two fluid passes for the refrigerating fluid is defined along a first direction from the first inlet to the first outlet for the first flow channel, and one of the at least two fluid passes for the cooling fluid is defined along a second direction from the second inlet to the second outlet for the second flow channel.

35. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein no more than one fluid pass extends in any one of the first and second flow channels.

36. (Currently Amended) A motor vehicle condenser, as claimed in claim 15 [[18]], wherein one of the at least two fluid passes for the refrigerating fluid extends through one of the first flow channels and another of the at least two fluid passes for the refrigerating fluid extends through another of the first flow channels and wherein one of the at least two fluid passes for the cooling fluid extends through one of the second flow channels and another of the at least two fluid passes for the cooling fluid extends through another of the second flow channels.

37. (Cancelled)

38. (New) A motor vehicle condenser comprising:

a multitude of stacked main-section plates having separate internal flow channels for refrigerating fluid and for cooling fluid,

wherein the main-section plates are assembled to delimit alternating first flow channels for refrigerating fluid and second flow channels for cooling fluid and are assembled in groups or sub groups of plates such that the groups or subgroups form at least two fluid passes for each of the refrigerating and cooling fluids, and

wherein the main-section plates define an inlet for each of the flow channels, respectively, and an outlet for each of the flow channels, respectively, with the inlet and the outlet of each flow channel spaced from each other and with one of the fluid passes defined in one direction from the inlet to the outlet of one of the respective flow channels,

wherein the plates further comprise communication passages to allow refrigerating and cooling fluid to pass from one flow channel to another and annular ducts facing the communication passages,

wherein the annular ducts alternately face the communication passages in such a way that the refrigerating and cooling fluid are prevented from mixing with one another,

wherein the annular ducts comprise bowls (122) formed in the plates (2), and

wherein the condenser comprises at least one condenser inlet and one condenser outlet for refrigerating fluid and at least one inlet pass (a) over the refrigerating fluid communicating with said condenser inlet, and another outlet pass (c) communicating with said condenser outlet, and the cross section of the passes diminishing from the inlet pass towards the outlet pass.

39. (New) A motor vehicle condenser, as claimed in claim 38, wherein the main-section plates are equipped with two communication passages intended for the passage of the refrigerating fluid (F1) and two communication passages intended for the passage of the cooling fluid (F2).

40. (New) A motor vehicle condenser, as claimed in claim 38, wherein the stacked plates (2) are equipped with turned-up peripheral edges (3) which are joined together in a sealed manner.

41. (New) A motor vehicle condenser, as claimed in claim 38, wherein one refrigerating fluid communication passage or, as appropriate, one cooling fluid communication passage, is omitted in some of the main-section plates so as to determine passes for the circulation of the refrigerating fluid or, as appropriate, for the circulation of the cooling fluid.

42. (New) A motor vehicle condenser, as claimed in claim 38, wherein the plates (2) are arranged in a first series (94) for cooling the refrigerating fluid until it condenses, and a second series (96) for cooling the refrigerating fluid below the temperature at which it condenses.

43. (New) A motor vehicle condenser, as claimed in claim 42, wherein the condenser further comprises a bottle (100) built in between the first and second series of plates (94, 96).

44. (New) A motor vehicle condenser, as claimed in claim 38, wherein turbulence generators (132, 136) are arranged between the plates (2).

45. (New) A motor vehicle condenser, as claimed in claim 44, wherein the plates have reliefs (144, 150, 158, 160) which constitute the turbulence generators.

46. (New) A motor vehicle condenser, as claimed in claim 38, wherein the hydraulic

diameter of the flow channels for the fluids (F1 and F2) is between 0.1 mm and 3 mm.

47. (New) A motor vehicle cooling circuit comprising the condenser as claimed in claim 38, wherein the plates are assembled to allow for the flow of a cooling fluid (F2) comprising water from the motor vehicle engine cooling circuit.

48. (New) An air-conditioning circuit, for the cabin of a motor vehicle, comprising an evaporator, a compressor and a condenser, in which a refrigerating fluid circulates, and wherein the condenser is in accordance with claim 38.

49. (New) A motor vehicle condenser, as claimed in claim 38, wherein each main-section plate has a longitudinal axis and has a first end and a second end spaced from each other along the longitudinal axis with the main-section plates stacked with each first end adjacent another first end and with each second end adjacent another second end and with the inlet of one flow channel defined at one of the first ends and with the outlet of that flow channel defined at one of the second ends.

50. (New) A motor vehicle condenser, as claimed in claim 38, wherein the inlets and outlets for each of the flow channels are further defined by the main-section plates as a first inlet and a first outlet for the first flow channel and a second inlet and a second outlet for the second flow channel, and one of the at least two fluid passes for the refrigerating fluid is defined along a first direction from the first inlet to the first outlet for the first flow channel, and one of the at least two fluid passes for the cooling fluid is defined along a second direction from the second inlet to the second outlet for the second flow channel.

51. (New) A motor vehicle condenser, as claimed in claim 38, wherein no more than one fluid pass extends in any one of the first and second flow channels.

52. (New) A motor vehicle condenser, as claimed in claim 38, wherein one of the at least two fluid passes for the refrigerating fluid extends through one of the first flow channels and

another of the at least two fluid passes for the refrigerating fluid extends through another of the first flow channels and wherein one of the at least two fluid passes for the cooling fluid extends through one of the second flow channels and another of the at least two fluid passes for the cooling fluid extends through another of the second flow channels.